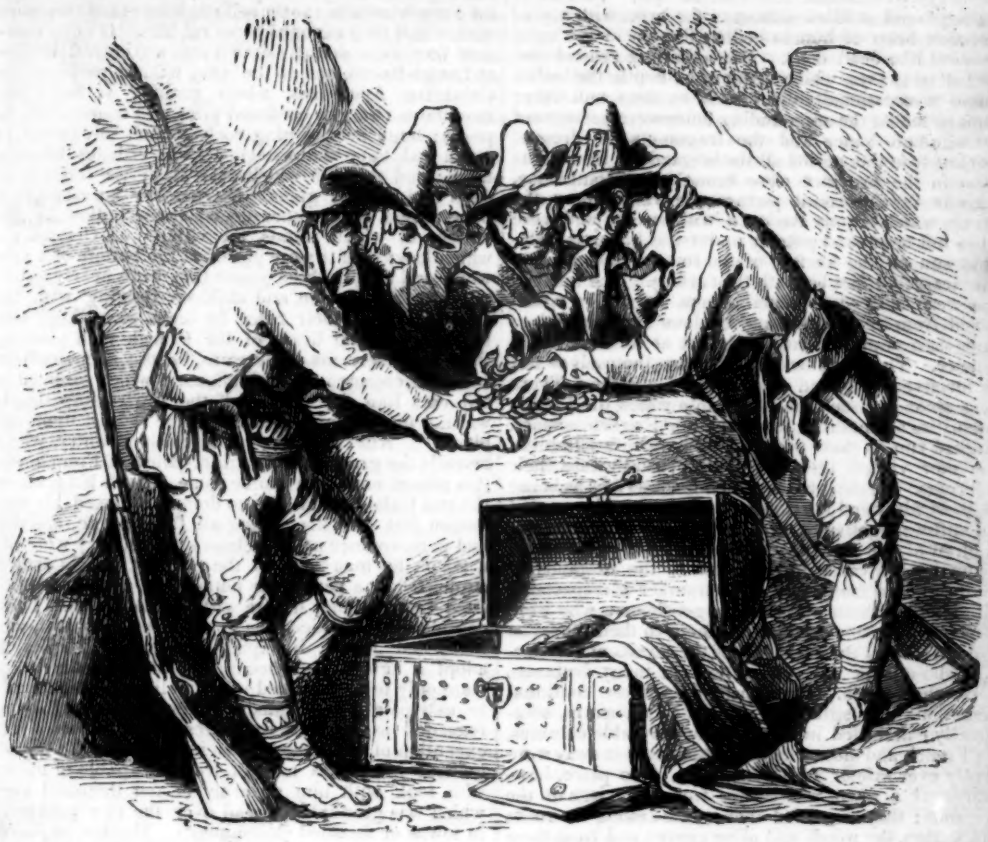

[Banditti dividing Booty.—From Pinelli.]

BRIGANDS.

From 1806 till 1815, or during the whole period of the French occupation of the south of Italy, brigandism raged in some parts of the States of the Church and of the Neapolitan kingdom—pure brigandism, or a brigandism mixed with patriotism, or a mortal hatred to the French conquerors. It was promoted and increased to a frightful extent by Napoleon's system of conscription, which seized upon all classes, to make soldiers of them, and to send them to fight and perish in Germany, Spain, Russia, and half the countries of Europe. Many a young man, previously of respectable condition and conduct fled to the mountains and joined the bands of irregular robbers, rather than be dragged to the army of the great and more regular robbers; others deserted at the first opportunity, and being safe from the pursuits of the gens-d'armes only in the wilds and widernesses, became of necessity fellow-denizens and co-mates with the brigands. For a long time Calabria continued to be the country most thronged with these banditti, and the portion of the south most fiercely and obstinately hostile to the French, who lost far more men there by the rifle, and the knife, and the malaria fevers, than they lost in several of their greatest campaigns and most brilliant conquests. From the first to the last they lost in the two Calabrias not fewer than twenty thousand men! The cruelties committed on both sides were atrocious. Mr. Elmhirst, an English naval officer, who, to save himself from drowning in a sinking vessel, took refuge on the Calabrian coast, and was made a prisoner of war by the French, had a near view of what was passing in the years 1809 and 1810, and has left upon record a terrific account of all he witnessed.* In the town of Monteleone he found an immense prison always filled by brigands, or by men whom the French and their partizans chose to designate as such, and a high gallows constantly at work. Fresh prisoners were continually brought in; but the daily executions prevented the prison from being too much crowded. These men were condemned, with merely a shadow of a trial, by martial law, and the executions were conducted solely by the military. They were hung up without having their shoes or hats taken off, or any covering put over their faces; and as they were turned off, they were fired at by their savage executioners, not to lessen their sufferings, but from mere spite or wantonness, for none of those Mr. Elmhirst saw were shot in a vital part, but had musket-shots through their legs, arms, &c., which would rather protract than diminish their torture. They were usually executed early in the morning, and left on the gallows, in pairs or in half-dozens, until the following morning, when they were taken down and thrown into an immense pit dug for the purpose, other victims being strung up in their places. Our worthy sailor had the curiosity

* 'Occurrences during a Six Months' Residence in the Province of Calabria Ulteriore,' &c., by Lieutenant P. L. Elmhirst, R.N.

and nerve to examine that horrible pit. Vast as it was, he found it filled almost to the brim with a promiscuous heap of human bodies, thrown in one upon the other like dead dogs. The adjoining ground also was full of graves, which being of no depth, the bodies had been occasionally disinterred by dogs and other animals, so that the surrounding fields were overspread with human bones and the fragments of dresses. Previously to this period all the brigands or insurgents taken in the province were brought to Monteleone, and shot in a pleasant picturesque valley, near the springs which supply the town with water; and were either left to rot and putrefy under the burning Calabrian sun on the surface of the soil, or thrown into holes scarcely a foot beneath the surface. The inhabitants were obliged to abstain from the water which flowed from those sweet and copious springs, and to bring their supplies from a rivulet at a considerable distance. The brutalised conquerors themselves felt the inconvenience, and chose a new Golgotha. There was a second prison in the town, into which the French authorities shamefully threw the few English seamen that had run on shore to save their lives with Elmhirst, who now visited them every day to alleviate their sufferings. In this prison, which he describes as being the most filthy and horrible of gaols, he found, crowded and stifling together, a great many of the wives and children of the peasantry, who had been suspected of favouring and carrying provisions to the brigands in the forests and mountains, and a number of respectable individuals, priests and country gentlemen, who were suspected of a too warm attachment to their Bourbon princes, now on the other side of the Straits of Messina, and whose slow martyrdom was in many instances worse than death. Notwithstanding these continual executions, and still more extensive massacres, occasionally committed in the field by moveable columns, the French and those who submitted to their sway were hardly ever safe or free from alarm. No place, however near a town, was secure from the visits of the brigands; they concealed themselves among the rocks and bushes, the woods and olive groves, and from these retreats sprung unawares on heedless and defenceless passengers; so that it was usual for a person, even if he had to go but half a mile from his residence, to go well armed and to take two or three armed companions with him. Few or none escaped their violence except the rural priests and the mendicant friars. If one of their own countrymen, a Calabrian, or a man from any other province of the kingdom, fell into their hands without a pigtail at the back of his head, he had no mercy to expect; for the old-fashioned pigtail was their political index by which they judged whether men were Jacobins or Bourbonists. To the heads of many who had conformed to the principles or the fashion of the day, and had cut off their queues, they sewed the tails of sheep, by way of furnishing them with the loyal appendage, and in that condition dismissed them. "So that every man," says our honest lieutenant, "who regarded his personal safety, took care to preserve an exuberance of hair; for the more he had, or the longer his queue, so much the more was he esteemed loyal, or an enemy to the French." The brigands frequently scalped or otherwise maimed such Calabrians as had no pigtails; and at times they cut off their fingers, and compelled them to eat them as the guilty instruments of a profanation of loyalty. Wherever our officer went he saw bleeding heads fixed on forked sticks. He declares, of his own knowledge, that many innocent and respectable men, innocent both of brigandism and of political partizanship, were executed while he was in the country. Some of the real bandits displayed a strategy which might have made them highly esteemed generals if they had been serving in the army of Napoleon; and many a time had the French cause to rue the self-confidence and contempt with which they engaged these robbers. On one occasion they were artfully drawn into a frightful hollow at Longo-Bucco, one of the very wildest parts of the Calabrian Apennines, where nothing is seen but mountains rising in confused piles, and terminating in peaks; huge overhanging rocks, which threatened to crush and bury the wretched little villages beneath them; and torrents which roar from the bottom of deep and gloomy glens. On another occasion they were drawn into another deep narrow hollow, at the bottom of which stands the village of Orsomarzo, which looks as if it were placed at the bottom of a vast well; and at both these places they were nearly exterminated, the women and children fighting with the men, or loading their rifles for them, or rolling down big stones on the heads of the French with piercing shrieks and screams—"Screams," says a French officer who was engaged in both affairs, "which sounded in our ears like the shrieks of the Furies, impatiently waiting the moment when they were to feast upon our blood."* After a long service in the country, which he calls the grave and slaughter-house of Frenchmen, this officer, most eager to be gone, turned his back on the two Calabrias, and in so doing expressed his conviction that notwithstanding all the courage, activity, and perseverance of Napoleon's troops, they were not a match for men born in the country, lightly armed, supported by a part of the population, and accustomed from their infancy to fire with a deadly aim. These considerations induced the government of Murat, who succeeded Joseph Bonaparte as king of Naples, to adopt a new system, according to which the troops were only to be employed in compelling the inhabitants to extirpate the brigands, under penalty of being regarded as their accomplices and abettors. The execution of this system was intrusted to the French general Manhes, a man of iron, incapable of mercy, who took with him an army of ten thousand men, which was gradually spread over the two provinces, in towns or fortified cantonments. Manhes improved upon the system. Any peasant, without distinction of sex or age, who was found going out to labour in the country with more in his wallet than a small flask of wine and a piece of bread, calculated to be just sufficient to support life for one day, was taken and shot; for, having made pretty sure of the towns and villages, whence the brigands could no longer supply themselves, he thought if he only could prevent the peasantry from smuggling out provisions to them, that they must either surrender, or die of want in the mountain fastnesses to which he had driven them. If a quiet honest man concealed or corresponded with or aided the escape of an outlaw—no matter were it his own father, or son, or brother, or bosom friend of former and happier days—he was tried over a drum-head and shot. If a Calabrian was found on the road, or in any other place, with a gun on his shoulder, or a knife in his girdle, and could not give a satisfactory account of himself, he was shot there and then. A captured and condemned brigand escaped from the cappella, or chapel, into which he had been allowed to go for confession and spiritual comfort before his execution; Manhes shot the poor priest and confessor, alleging that he must have aided the robber in his escape. If any town or village allowed the brigands a passage, it was visited with fire and sword, without any minute investigation as to its capability of resisting an armed band desperate as hungry tigers;—and Manhes had deprived the people of their arms. Yet, after all these vigorous measures, the French found that the snake was scotched, not killed; and

* 'Letters on the Calabrias,' by a French officer.

though brigandism was restrained, it was not suppressed in the Calabrias until the spring of 1815, when King Ferdinand was restored to his dominions. Since that time there have been highway robberies in Calabria, as in better-governed countries; but of brigandism, properly so called, there has been little or nothing. Between the years 1816 and 1824, we several times traversed great parts of those provinces, and whatever may have been our personal inconveniences in other matters, we had no reason to complain of the dishonesty of the people, or to fear any attack of brigands. The Abruzzi were still more tranquil and honest. But in Apulia and Basilicata, in the parts of the Terra di Lavoro which touch on the States of the Church, and within the frontiers of those States themselves, brigandism continued to flourish several years longer.

DOMESTIC CONSERVATORIES FOR PLANTS.

It is always with pleasure that we notice any addition to the stock of harmless pleasures in which the bulk of the people can participate. The influence of those which are of an opposite character is thus directly weakened, and something is done towards satisfying one of the great wants of society. Formerly the green-house or conservatory was regarded as exclusively the appendage of the stately mansion, or the suburban villas of the opulent, but it has been made an inexpensive means of gratifying a taste, which, while it is at once refined and elegant, excites an inquisitive spirit that raises those who are fortunate enough to be under its influence above low and frivolous pursuits. The love of the beautiful in nature, from a pansy to a forest oak, is deeply implanted in the human breast, and constitutes a source which requires only to be reached and acted upon, in order to diffuse on every side innumerable advantages to individuals and to society. We see the love of plants and flowers existing, apparently under the most discouraging circumstances, and in spots where poverty chokes almost all the springs of wholesome pleasure. But even there are some who

> "Overhead
> Suspend their crazy boxes, planted thick,
> And watered duly. There the pitcher stands,
> A fragment, and the spoutless tea-pot there."

It is pitiable to see these sickly objects of care in the pent-up town, pining under the influence of the dry atmosphere; and deep must be the inherent taste which can persevere in resisting the obstacles to healthy vegetation, caused by deleterious matter floating constantly in the air, the excess of aridity or moisture, excessive heat and cold, sudden alternations of temperature, and nipping blasts. Against these destructive influences the green-house is a protection; but it is one which is not available in large towns, especially in London. Mr. N. B. Ward, a medical gentleman practising in the metropolis, has, however, successfully met this difficulty, and, in accomplishing his object, has developed a system which is capable of most extensive application, and promises to be as interesting to science as to the amateur whose love of plants is of the simplest kind.*

In the summer of 1829, Mr. Ward buried the chrysalis of a sphinx in some moist mould, contained in a wide-mouthed glass bottle, covered with a lid. Watching the bottle from day to day, he observed that the moisture which became condensed on the internal surface of the glass during the heat of the day, was again absorbed, thus keeping the mould always in a state of humidity. Before the final change of the insect, a seedling fern sprung up from the mould, of a species which Mr. Ward had fruitlessly endeavoured to cultivate on some rock-work in a yard at the back of his house. The bottle was now placed outside a window with a northern aspect, and the fern continued to flourish for nearly four years, until accidentally destroyed during Mr. Ward's absence from home. During this long period the evaporation and condensation of moisture constantly kept the mould moist. Mr. Ward soon began to extend his experiments to plants which the most skilful botanists had never been able to keep alive, and which were especially intractable on account of the occasional aridity of the atmosphere being fatal to them. Amongst these was a beautiful cellular plant, which is found on the rocks at Killarney and in the laurel forests of Teneriffe. In Mr. Ward's closely-glazed case it lived in the middle of London, enjoying the atmosphere in which it delights.

Having satisfied himself of the success of his new mode of growing plants, Mr. Ward extended his experiments still further, and at the present time has five cases, some of them of the size of a small green-house, in which plants of every soil and climate are flourishing in perfect health, and as luxuriantly as in their natural habitat, and all this has been effected in one of the crowded parts of London. His glazed case called the 'Tintern Abbey House,' is about eight feet square, and is placed outside a staircase window. In the middle of summer the sun shines upon it for about an hour, in the morning and evening respectively, but in winter not at all. It contains about fifty species of British, North American, and other hardy ferns, and a number of flowering plants which are adapted to a cold situation, and do not require much solar heat. The 'Alpine Case' contains plants which naturally flourish only at a high elevation. The 'Drawing-room Case' stands in the window of a room with a southern aspect, and is filled with two or three small palms, some ferns, and a few other plants in the bottom; and from a bar which runs from end to end at the top small pots are suspended, which contain two or three species of cactus and one or two aloes. In summer the temperature is frequently 110°, and the case requires water occasionally. There are two cases with crocuses and winter aconites, one of which was placed outside a window, where there was abundance of solar light, and the other in a warm room with a deficiency of light. This was done for the sake of experiment; and the result was, that in the first-mentioned case the plants grew naturally, while those deprived of a sufficiency of light produced long and pale leaves, but not a single flower. Another case, planted with crocuses and aconites, was placed on a staircase close to a gas-light, the plants being excluded from the light of day by a thick dark cloth, which was removed when the gas was lighted at night. They were thus exposed to artificial light accompanied with some degree of heat, from five to eight hours out of the twenty-four, spending the remainder of their time in a state of rest. "The plants grew very well, the leaves not so much drawn up as those in the warm room, and the colour more intense. One root flowered, the colour of the flower being blue." There is also the 'Case with Spring Flowers,' which was placed outside a window with a southern aspect, in the month of February, and Mr. Ward, writing in March, says: "It is not, I believe, possible to see these plants to such an advantage in any ordinary garden." No nipping winds check their luxuriance, and they continue in flower for two or three months. In Mr. Ward's cases, cut flowers will remain without fading two or three times as long as in an ordinary room, where, in consequence

* 'On the Growth of Plants in closely-glazed Cases.' By N. B. Ward, F.L.S.

of the rapid evaporation, they soon droop. The principle of Mr. Ward's system is further illustrated by two of the smallest varieties of Fairy Rose. Three years ago they were each planted in a tub and covered with a bell-glass, and have ever since remained outside a window facing the south. They continue in flower four or five months, and scarcely any watering is required, as this is sufficiently effected whenever rain falls, in consequence of the diameter of the glass being less than that of the tub of mould at the surface.

In common gardening we see the shadiest spot selected for certain plants, while others are exposed so as to catch the greatest degree of solar light and heat, and some are placed in situations where they are sheltered from the ungenial winds. They cannot however be entirely protected from the alternations of the temperature, and from the variability of the elements, and though many plants not perfectly acclimatised may flourish for several seasons, they are cut off at length, either by a very cold winter, unusually hot summer, late frosts, or chilling easterly winds. Others cannot be planted out of doors at all in our climate, but require the shelter of the green-house. Mr. Ward's glazed cases are still more effectual than the ordinary green-house. They protect the plant from the action of the external air, by maintaining the atmosphere in a state of perfect quietness. Under this condition extremes of heat and cold may be endured which would otherwise be completely destructive of the vital principle. Intense cold is often experienced in winter when a brisk wind is blowing, although the thermometer may have risen from a lower point, during which the sensation of cold was scarcely felt, in consequence of the atmosphere being undisturbed, in these instances the thermometer not being a correct indication of the sensations. This is the great principle of success in the glazed cases. Mr. Ward has had plants for three years in a window with a southern aspect, and continually exposed to a heat which, without the glass, would have withered them in a single day. The exclusion of particles of soot and other noxious matter adapts the conservatory for the town as well as the country; and we may select any spot we please, a court-yard, drawing-room, or staircase window, or a double window, in which to place the glazed cases, and bid the plants of tropical regions flourish in the most unpropitious spots in the heart of London. In prisons men have solaced themselves for the loss of liberty by the visits of a spider or a mouse, whose motions they have watched and studied with delight; but here is a study open to every one who enjoys the comforts of a home, which is pregnant with the most admirable results, at once gratifying the eye and informing the mind, and opening a page of the book of nature to the dweller of the city; and from its inmost recesses he may proceed, thus instructed, with an intelligent and inquiring spirit, to claim an acquaintance with the beautiful creations of vegetable life in every region of the earth.

The cost of one of the glazed cases is very trifling. The box containing the plants should be lined with zinc, and have three or four openings at the bottom for drainage; and glazed frames, well painted and puttied, can be procured at about one shilling the square foot. The plants to furnish it scarcely need cost a single farthing. Mr. Ward remarks: "The common ivy grows most beautifully and can be trained over any part of the case. The primroses in early spring will abundantly repay the labour of fetching them, continuing for seven or eight weeks to flower as sweetly as in their native woods. So likewise does the wood-sorrel, the anemone, the honeysuckle, and a host of other plants, independently of numerous species of mosses and ferns. There are likewise many cultivated plants procured at little or no cost, which grow without the slightest trouble, as the common musk-plant, myrtles, jasmines, &c. All the vacant spaces in the case may be employed in raising small salads, radishes, &c., and I think that a man would be a bad manager who could not, in the course of a twelve-month, pay for his case out of its proceeds. These remarks apply chiefly to situations where there is but little solar light. Where there is more sun, a greater number and variety of flowering plants will be found to thrive, such as several kinds of roses, passion-flowers, geraniums, &c., with numerous beautiful annuals. These cases form the most beautiful blinds, as there is not a window in London which cannot command throughout the year the most luxuriant verdure. The condensation of the moisture upon the colder surface of the glass effectually obscures the view from without, and at the same time admits far more light than is allowed to enter by ordinary blinds. Nothing can be more cheerful than the appearance of rooms thus furnished." The cases may vary in size, from that which fills the sill of a window, to one in which a diversity of heat, light, and moisture is obtained, suited to the natural condition of plants which differ widely from each other in their natural characteristics. Mr. Ward's largest experimental house is twenty-four feet long, twelve feet wide, and eleven high. We need not enlarge on the advantages which botanists will derive from the observations which the closed cases will enable them to carry on respecting several obscure points in the physiology of plants. Mr. Ward on one occasion watched during a whole night the development of the Phallus fœtidus, which shot up four inches in an hour and a half. The growth of other fungi is equally curious and interesting. Lastly, the transport of seeds and plants from one part of the globe to the other may be successfully accomplished; and the French and English governments have ordered the glazed cases to be used in all expeditions of discovery. Plants have been brought to England for the first time by this means, after every previous attempt had failed This need scarcely be wondered at when we take into account the variations of temperature which they had to undergo. Plants, for example, leave Sydney, where the temperature is 90° or 100°; south of Cape Horn it falls to 20°; in crossing the line rises to 120°, and finally reach England at a period perhaps when the thermometer ranges at 40°. Seeds can also be sown in the mould, and taken with still less difficulty from the tropics to any part of the temperate zone.

Mechanism of the Human Foot.—There is nothing more beautiful than the structure of the human foot, nor perhaps any demonstration which would lead a well-educated person to desire more of anatomy than that of the foot. The foot has in its structure all the fine appliances that you see in a building. In the first place, there is an arch in whatever way you regard the foot; looking down upon it we perceive several bones coming round from the astragalos, and forming an entire circle of surfaces in the contact. If we look at the profile of the foot, an arch is still manifest, of which the posterior part is formed by the heel, and the anterior by the ball of the great toe; and in the front we find in that direction a transverse arch: so that instead of standing, as might be imagined, upon a solid bone, we stand upon an arch composed of a series of bones, which are united by the most curious provisions for the elasticity of the foot: hence, when we jump from a height directly upon the heel, a severe shock is felt; not so if we alight on the ball of the toe, for there an elasticity is found in the whole foot, and the weight of the body is thrown upon this arch, and the shock avoided.—*Sir C. Bell.*

[Oak Tree (*Quercus sessiliflora*).]

THE OAK.

Of this tree more than a hundred and fifty species are enumerated, and most of them are valuable either as timber, or for their products. The species from which the best timber is derived, are, however, the common oaks, *Quercus sessiliflora* and *pedunculata*, both natives of Britain, and to them we shall chiefly confine ourselves. In point of strength, durability, and general applicability, these oaks claim the precedence of all timber; and to England, which has risen to the highest rank among the nations, mainly through her commerce and her marine, the oak, "the father of ships," as it has been called, is inferior in value only to her religion, her liberty, and the spirit and industry of her people. The oak has been an object of veneration from the earliest period: from the grove of Dodona, where

> "Cynthia check'd her dragon yoke,
> Gently o'er the accustom'd oak;"

contributing the oaken crowns of the Romans; forming a main feature in the worship of the Druids; the seat of justice among the Teutonic nations; and existing yet in England as boundary-marks or records of some remarkable circumstance or historical event.

A fine oak is one of the most picturesque of trees. It conveys to the mind associations of strength and duration which are very impressive. The oak stands up against the blast, and does not take, like other trees, a twisted form from the action of the winds. Except the cedar of Lebanon, no tree is so remarkable for the stoutness of its limbs; they do not exactly spring from the trunk, but divide from it; and thus it is sometimes difficult to know which is stem and which is branch. The twisted branches of the oak, too, add greatly to its beauty; and the horizontal direction of its boughs, spreading over a large surface, completes the idea of its sovereignty over all the trees of the forest. Even a decayed oak—

> "——— dry and dead,
> Still clad with reliques of its trophies old,
> Lifting to heaven its aged, hoary head,
> Whose foot on earth hath got but feeble hold—"

—even such a tree as Spenser has thus described is

strikingly beautiful: decay in this case looks pleasing. To such an oak Lucan compared Pompey in his declining state. The beauty also with which it groups, in its flourishing state, with other features, must have been recognised and will be acknowledged by all. "The unwedgeable and gnarled oaks," standing among their more fragile and short-lived companions of the wild forest, braving the wintry storms of untold ages, or united with their more domestic and calmer associations, where

"Hard by a cottage chimney smokes
From betwixt two aged oaks,"

are alike objects of unfailing interest.

Of its culture, the nature of the soils suited to it, of the uses of its timber, its bark, and its fruit, our limits would not permit us to give any satisfactory account; we therefore refer the reader to some of the many able volumes which have been written on the subject, and shall in this paper confine ourselves to a notice of some of the many remarkable English oaks, and for which we shall be indebted to Mr. Loudon's very excellent work on the 'Trees and Shrubs of Britain,' he having in fact exhausted the subject; and though we were to go to the original authorities, we should even then be able to give little more, and perhaps not so well as he has already done.

"The Leaden Oak, in Ampthill Park, so called from a large piece of lead having been fixed on it many years ago, is remarkable for having been one of the oaks marked in a survey made of the park in the time of Cromwell, as being then too old for naval timber. It is sixty-seven feet high; its trunk is thirty feet six inches in circumference; and the diameter of its head is eighty-five feet."

"In Windsor Forest, there are several celebrated oaks: one of these, the King Oak, is said to have been a favourite tree of William the Conqueror, who made this a royal forest, and enacted laws for its preservation. This oak, which stands near the enclosure of Cranbourn, is twenty-six feet in circumference at three feet from the ground. It is supposed to be the largest and oldest oak in Windsor Forest, being above one thousand years old. It is quite hollow: the space within is from seven feet to eight feet in diameter, and the entrance is about four and a half feet high, and two feet wide. 'We lunched in it,' says Professor Burnet, 'September 2, 1829: it would accommodate at least twenty persons with standing room; and ten or twelve might sit down comfortably to dinner. I think, at Willis's and in Guildhall, I have danced a quadrille in a smaller space.' (*Amœn. Quer.*, fol. x.; and *Eidodendron*, pl. 29.) Queen 'Anne's Oak,' says Professor Burnet, 'is a tree of uncommon height and beauty, under which tradition says that Queen Anne, who often hunted in Windsor Forest, generally came to mount her horse.'"*

"The large oak at Wootton is, probably, one of the handsomest in England. Its trunk measures twenty-five feet in circumference at one foot from the ground; and at the height of twelve feet it divides into four large limbs, the principal of which is fifteen feet in circumference. It is above ninety feet high, and covers an area of one hundred and fifty feet in diameter with its branches. The great beauty of this tree is the breadth of its head, occasioned by the enormous size of its limbs, which gives it so completely the character of the oak, that not even the most superficial observer could ever for a moment mistake it for any other tree. The Wootton Oak has all the attributes of beauty, dignity, and majesty usually given to the oak-tree: it once formed part of the ancient forest of Bern Wood, which was a favourite hunting-ground of Edward the Confessor."

"Meavy's Oak, on Dartmoor, is about fifty feet high; the trunk, which is twenty-seven feet in circumference, is hollow, and it has held nine persons at one time. This oak is supposed to have existed in the time of King John. The Flitton Oak stands singly on a spot where three roads meet, on an estate belonging to the Earl of Morley, in the parish of North Molton. It is supposed to be a thousand years old; and, within the memory of man, it was nearly twice its present height, which is now about forty-five feet. It is thirty-three feet in circumference at about one foot from the ground; and at about seven feet it divides into eight enormous limbs."

"Not far from Blandford, Gilpin observes, there 'stood very lately a tree known by the name of Damory's Oak. About five or six centuries ago, it was probably in a state of maturity.' It measured sixty-eight feet in circumference at the ground, and seventeen feet above it was sixteen feet in girth. As this immense trunk decayed, it became hollow, forming a cavity fifteen feet wide and seventeen feet high, capable of holding twenty men. During the civil wars, and till after the Restoration, this cave was inhabited by an old man, who sold ale in it. A violent storm, in 1703, greatly injured this venerable oak, and destroyed many of its noblest limbs; however, forty years after, it was still so stately a ruin, that some of its branches were seventy-five feet high, and extended seventy-two feet from the bole. 'In 1755, when it was fit for nothing but fire-wood, it was sold for 14*l*.'"

"The Great Oak at Stockbridge stands on part of the estate of Robert Gordon, Esq., of Leweston, within a few yards of the turnpike-road. This oak, though it has stood there several centuries, is in perfect health, with a well-formed head. The trunk is twenty-two feet in circumference, height fifty-two feet, and diameter of the head ninety-five feet. One of the branches has been broken about ten feet from the bole, apparently many years ago; and the extremity, about twenty-five or thirty feet from the tree, now lies completely buried in the ground. The tree stands singly in a very conspicuous situation, on rising ground, and attracts the notice of travellers. At Melbury Park, there is an old oak, called Billy Wilkins, which is fifty feet high, spreads sixty feet, and has a trunk eight feet high before it breaks into branches, which is thirty feet in circumference at the smallest part, and thirty-seven feet at the collar. It is a remarkably gnarled, knotty tree, and is called by Mitchell, in his 'Dendrologia,' 'as curly, surly, knotty an old monster as can be conceived;' though for marble-grained furniture, he adds, it would sell at a guinea per foot."

"The Fairlop Oak stood in an open space of Hainault Forest. 'The circumference of its trunk, near the ground, was forty-eight feet; at three feet high, it measured thirty-six feet round; and the short bole divided into eleven vast branches, not in the horizontal manner usual in the oak, but rather with the rise that is more generally characteristic of the beech. These boughs, several of which were from ten feet to twelve feet in girth, overspread an area three hundred feet in circuit; and for many years a fair was held beneath their shade, no booth of which was allowed to extend beyond it. This celebrated festival owed its origin to the eccentricity of Daniel Day, commonly called "Good Day," who, about 1720, was wont to invite his friends to dine with him, the first Friday in July, on beans and bacon, under this venerable tree. From this circumstance becoming known, the public were attracted to the spot; and about 1725 the fair above mentioned was established, and was held for many years, on the 2nd of July in each year. Mr. Day never failed to provide annually several sacks of beans, which he distributed, with a proportionate quantity of

* We have already given notices of Herne's Oak, in No. 645.

bacon, from the hollowed trunk of the oak, to the crowds assembled. The project of its patron tended greatly, however, to injure his favourite tree; and the orgies annually celebrated to the honour of the Fairlop Oak yearly curtailed it of its fair proportions. Some years ago, Mr. Forsyth's composition was applied to the decayed branches of this tree, to preserve it from future injury; probably by the Hainault Archery Society, who held their meetings near it.' (Lysons.) At this period, a board was affixed to one of the limbs of this tree, with this inscription:—'All good foresters are requested not to hurt this old tree, a plaster having been lately applied to his wounds.' (See 'Gent. Mag.' for 1793, p. 792.) 'Mr. Day had his coffin made of one of the limbs of this tree, which was torn off in a storm; and, dying in 1767, at the age of eighty-four, he was buried in it in Barking churchyard. The persons assembled at the fair frequently mutilated the tree; and it was severely injured by some gipsies, who made its trunk their place of shelter. But the most fatal injury it received was in 1805, from a party of about sixty cricketers, who had spent the day under its shade, and who carelessly left a fire burning too near its trunk. The tree was discovered to be on fire about eight in the evening, two hours after the cricketers had left the spot; and though a number of persons, with buckets and pails of water, endeavoured to extinguish the flames, the tree continued burning till morning.' ('Gent. Mag.,' June, 1805, p. 574.) 'The high winds of February, 1820,' Professor Burnet informs us, 'stretched this forest patriarch on the ground, after having endured the storms of perhaps one thousand winters. Its remains were purchased by a builder; and from a portion thereof the pulpit and reading-desk in the new church, St. Pancras, were constructed: they are beautiful specimens of British oak, and will long preserve the recollection of this memorable tree.'"

"The Great Oak, at Panshanger, growing on the estate of Earl Cowper, is, as Strutt observes, a fine specimen of the oak-tree in its prime. Though upwards of two hundred and fifty years old, and though it has been called the Great Oak for more than a century, it yet appears 'even now to have scarcely reached its meridian: the waving lightness of its feathery branches, dipping down to the very ground, the straightness of its stem, and the redundancy of its foliage, give it a character the opposite of antiquity, and fit it for the sequestered and cultivated pleasure-grounds in which it stands.'"

"The Nannau Oak, which was blown down in 1813, measured twenty-seven feet six inches in circumference, and had for centuries been celebrated among the Welsh as the Hobgoblin's Hollow Tree, 'Dderwn Ceubren yr Ellyll.' This celebrated tree was also known by the names of the Spirit's Blasted Tree, and the Haunted Oak. The legend respecting it is, that Howel Sele, a Welsh chieftain, and Lord of Nannau, was privately slain in a hunting quarrel by his cousin Owen Glendower and his friend Maddoc. The body, in which life was not yet extinct, was hidden in the hollow trunk of this tree by the murderers. Owen returned in haste to his stronghold, Glendewwrdry. Howel was sought for, but in vain; and, though groans and hollow sounds were heard proceeding from the tree, no one thought of looking in it. After a lapse of years, Owen Glendower died, and on his deathbed enjoined his companion Maddoc to reveal the truth: he did so, and the skeleton of Howel was discovered upright in the hollow of the tree, and still, according to the legend, grasping a rusty sword in its bony hand. A ballad on this subject, by Mr. Warrington, is printed in the notes to Scott's 'Marmion.'"

[To be continued.]

DELABOLE SLATE-QUARRIES.

In a recent number we gave an account of slate-quarrying in Cumberland: we have now been favoured by a correspondent with a more detailed description of the working of a celebrated quarry at the other extremity of the kingdom.

The Delabole quarries are situated in this parish of St. Teath, in Cornwall, about twelve miles from Bodmin. They are three in number—two of them placed in the recess of a long line of hills of very moderate elevation, the third on the other side of these hills. It is to the largest and innermost of the two that our description chiefly refers.

On entering the works at the inner end of the recess (about three-fourths of a mile in depth and one-fourth wide at the outer opening) a mass of apparent rubbish first presents itself. Much of the heap is really such, and consists of the refuse of the quarry. Over this trams are laid down in various directions for conveying the waggons loaded with raw material raised from the pit. The unserviceable portion is for the most part brought up separately, and goes to extend and elevate this ever accumulating mass, while the true slate is run off the trams to other spots to be prepared by the workmen. Owing to the slope of the ground, this heap is on a level with the entrance, and from it the sights and sounds of busy industry appear, and the ear is assailed by the reverberating crash of explosions proceeding from the pit. The waggons are seen advancing along the trams propelled by men, steam-power having previously brought them up the incline; the splitters are actively taking off the loads as brought to them, and the produce of their industry appears on all sides in long piles of roofing-slate ready for use.

From this point there is a striking view of the lower quarry, its machinery, incline, &c.; the men studded over a vast heap of débris; beyond, you look out over an undulating country, chiefly in pasture, the rough ridge of Brown Willy rising in the distance. Standing at the edge of the pit, a visitor might almost suppose himself at a railway station, from the many lines of trams, turning platforms, &c. Looking over the boarding fixed there for security, a singular spectacle presents itself. This pit is three hundred feet deep, and its surface at the bottom about three-quarters of an acre. The sides are precipitous, but of unequal height, the bottom apparently level; on it are working about a hundred quarrymen. Bending down to their labour, and clothed in a whitish dress, their diminutive appearance at that depth affords a resemblance to sheep scattered over a deep hollow. On looking round, we observe two steam-engines in buildings a short distance apart and not far from the edge. From these issue eight sets of double parallel chains running over the *puppet-heads*, a structure elevated many feet above us. At each head a waggon is raised or lowered by one chain, supported on the other by an iron arm, having a small iron wheel at the end, which wheel runs on this second chain, fixed in the bottom of the pit, and is kept to it by a loop. Thus the waggon throws out as it were a fore foot, which seems to wheel up and down the chain, and in fact does so, but for a purpose to be presently explained.

The tumbrils of the waggons are used as buckets. They are wholly of wrought-iron, about four feet square and a foot deep. In these the slate is brought up. On reaching the brink, or rather the *puppet-heads* several feet higher, a platform, on which are the wheels &c., resting on trams, is run out, and the tumbrils are lowered on it. The waggons are then pushed on by hand to the foot of the incline before mentioned, which is laid up the side of the rubbish heap, from whence

they are drawn by an endless chain attached to steam-machinery, an empty waggon descending a parallel incline at the same moment, and thus aiding also the ascent of the loaded one. At the top the waggon detaches itself by a simple and ingenious contrivance, and is then further propelled by hand to the splitters.

It is, of course, necessary sometimes to lower them directly down under the puppet-head; at others, to direct them to the opposite side of the pit, or to some intermediate point, just as the quarried slate may lie at the moment. This is done in the following manner:—One of the two chains belonging to each set of the eight is fixed at the bottom of the pit, at the opposite side. It is very long, and usually hangs down, perpendicularly, the remainder of its length lying along the bottom of the pit. By the other chain the tumbril is lowered. In lowering it directly down, the fixed chain remains quiescent; but when it is wished to deposit the tumbrils at any more distant point, the fixed chain is more or less tightened into an inclined position by the aid of machinery on the surface; the tumbril consequently follows the fixed chain, by means of the wheel attached, and is deposited at the desired spot. Very large pieces required for any particular purpose are brought up slung in chains.

Once in every hour the blasting charges are fired off. Those on the same side of the quarry are fired together, the pitmen collecting on the side opposite in perfect security.

About seven hundred tons are raised daily. The sides of the pit are not of uniform height all round. At the lowest point is a fixed ladder, by which the workmen go up and down. This ladder is very little out of the perpendicular, and has a fearful look! On the side opposite to the puppet-heads is a lift of pumps for draining the pit, worked by a water-wheel above a hundred yards distant. When water fails, this wheel is moved by steam-power.

Although, for convenience sake, the works have been described as entered by the inner end of the nook in the hills, yet the most striking appearances are presented when proceeding *up* the recess. At the entrance a stupendous heap of débris fronts us; on the left the recess has a steep slope with a little wood on it; a lofty engine-chimney, like a round tower, rises before us; farther up we again arrive at the works of the quarry, the rubbish heap showing as a mass of blue slate, and the view closed by the grassy ridge of the hill, crowned at intervals with houses of the workmen. Proceeding onwards we come again to the pit, but on the side opposite to that on which we before stood. From the slope of the ground, the machinery, puppet-heads, &c., which now front us, are much elevated, seeming almost to be hung in the air. The sides of the pit adjoining these are in many parts built up to a lofty height, like fortress walls, to prevent the rubbish from falling back into it; while the enormous chains swinging about, the tumbrils hanging from them, and directly over the heads of the workmen below, the occasional roar of the blasting and roll of the smoke,—all this produces a striking effect.

The masses obtained by blasting are divided in the pit into blocks about a foot in thickness. These again, when brought to the surface, are further split by chisel and mallet into the various sizes required. Roofing-slate is squared up by hand, the workman holding the slate on a thin piece of iron fixed edgewise in a block of wood and striking it with a *gix*, or mason's cutter. He regulates the size by a notched stick. Fanciful titles are given to the different sizes, as princesses, duchesses, countesses, &c. They are arranged in long rows, those of the same sort together. Between every ten dozen a bit of rough slate is placed, so that in making up orders the counting is speedily performed. The colour of the slate is a greyish blue. Chimney-pieces are manufactured of it, and various other articles, including tomb-stones, which are prepared in a set of workshops near the engines. Nearly the whole of the power employed here is from steam, the two engines, of forty-horse power each, supplying what is required, in addition to the pit-work, &c. The plates are cut into sizes by circular saws on Brunel's principle, of small diameter, but large teeth. The saw cuts on the average about a foot in a minute, not however without sundry *hitches* occasioned by the nature of the material. There are also twenty-four frames carrying saws of the usual kind for stone-cutting, without teeth, and worked by cranks. The first step towards polishing is to give an even surface to the plates. This is effected by fixing the rough slate on a bed moving on rollers, and forcing it, by means of a winch (turned by hand), against a sort of large chisel. The polishing is completed by working the plate horizontally up and down a fixed bed or face, on which sand and water are directed in the usual manner. Water-tanks are also made of this slate, capable of holding from a few gallons up to one thousand: they are used likewise for salting meat, malt-cisterns, &c. They are sent from the works in parts, grooves being cut in the side-pieces, into which the ends fit. When set up, the sides are screwed close home on the ends by four iron rods running through them outside the ends, beyond which the side-pieces project a little. For flooring the slate is extensively used. Some single pieces for this or other uses, of ten feet square and upwards, are successfully finished. As may be supposed, the roofs in the surrounding country are all of slate. It is also much used for door porches, steps, sills, edgings, &c. Fences are obtained from the same convenient material, a bank of earth four feet high being raised, on which are fixed large angular pieces of slate somewhat inclined.

For exporting the produce of the quarries, there are two places on the neighbouring coast. Port Gavan, distant four miles, and Boscastle, five. Much is sent coastwise, and about twenty cargoes of roofing-slate, of eighty tons each, exported to France. The slate is conveyed to the seaside in waggons drawn partly by oxen and partly by horses. Some pyrites and quartz crystals of good water are found occasionally. In the three Delabole quarries about seven hundred people are employed, and about a tenth of the number are women. The wages are good; men earning on an average 15*s*. a week, and women 6*s*. These last, while at work, wear over their other dress a common waggoner's frock, to protect it from the dust of the slate. Nearly the whole of the employment is piece-work (called *tut*): There are about twenty departments, the principle of division of labour being fully acted on. The people are paid once a month only, the time required for measuring piece-work not permitting (it is said) more frequent payments. A market is held on the premises twice a week; once for meat, and once for corn. In Messrs. Avery's works (to which our description refers) a set of rules for the government of the people, both as to their working and their conduct generally, is adopted. Various fines are inflicted for infractions. These, after paying the salary of a medical man, are bestowed in rewards to those who, during the year, have not incurred any fine. As a body the quarriers are well-conducted and industrious. Potato plots are cultivated by them in the neighbouring lands, and in summer they may be often seen hoeing and cleaning their crops after the hours of work are over.